

**CRF Errors Edited by the STIC Systems  
Branch**

Serial Number: 09/977,615B

CRF Edit Date: 3/21/05  
Edited by: AR

\_\_\_\_\_ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

\_\_\_\_\_ Corrected the SEQ ID NO. Sequence numbers edited were:

\_\_\_\_\_

\_\_\_\_\_ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

\_\_\_\_\_

\_\_\_\_\_ Deleted: \_\_\_\_\_ invalid beginning/end-of-file text ; \_\_\_\_\_ page numbers

\_\_\_\_\_ Inserted mandatory headings/numeric identifiers, specifically:

\_\_\_\_\_

\_\_\_\_\_ Moved responses to same line as heading/numeric identifier, specifically:

\_\_\_\_\_

Other:

Sequence 9-converted <2227(10). (10) to <2227  
(9). (9)



IFW16

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/977,615B

DATE: 03/21/2005

TIME: 15:14:36

Input Set : A:\PTO.AMC.txt  
 Output Set: N:\CRF4\03212005\I977615B.raw

3 <110> APPLICANT: EraGen Biosciences, Inc.  
 4       Grenier, Jennifer  
 5       Marshall, David  
 6       Prudent, James  
 7       Richmond, Craig  
 8       Roesch, Eric  
 9       Scherrer, Christopher  
 10      Sherrill, Christopher  
 11      Ptacin, Jerod  
 13 <120> TITLE OF INVENTION: Solid Support Assay Systems and Methods Utilizing Non-Natural  
 14      Bases  
 16 <130> FILE REFERENCE: PAT015-US5  
 18 <140> CURRENT APPLICATION NUMBER: 09/977,615B  
 19 <141> CURRENT FILING DATE: 2001-10-15  
 21 <150> PRIOR APPLICATION NUMBER: 60/240,397  
 22 <151> PRIOR FILING DATE: 2000-10-14  
 24 <150> PRIOR APPLICATION NUMBER: 60/282,831  
 25 <151> PRIOR FILING DATE: 2001-04-10  
 27 <150> PRIOR APPLICATION NUMBER: 09/861,292  
 28 <151> PRIOR FILING DATE: 2001-05-18  
 30 <150> PRIOR APPLICATION NUMBER: 60/293,259  
 31 <151> PRIOR FILING DATE: 2001-05-22  
 33 <160> NUMBER OF SEQ ID NOS: 165  
 35 <170> SOFTWARE: PatentIn version 3.2  
 37 <210> SEQ ID NO: 1  
 38 <211> LENGTH: 10  
 39 <212> TYPE: DNA  
 40 <213> ORGANISM: Artificial  
 42 <220> FEATURE:  
 43 <223> OTHER INFORMATION: synthetic oligonucleotide  
 46 <220> FEATURE:  
 47 <221> NAME/KEY: modified\_base  
 48 <222> LOCATION: (3)..(3)  
 49 <223> OTHER INFORMATION: n represents iso-cytosine  
 52 <220> FEATURE:  
 53 <221> NAME/KEY: modified\_base  
 54 <222> LOCATION: (6)..(6)  
 55 <223> OTHER INFORMATION: n represents iso-cytosine  
 59 <400> SEQUENCE: 1  
 W--> 60 gangtntgtc  
 63 <210> SEQ ID NO: 2  
 64 <211> LENGTH: 10  
 65 <212> TYPE: DNA

ppr 6-7

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RAW SEQUENCE LISTING  
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Input Set : A:\PTO.AMC.txt  
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66 <213> ORGANISM: Artificial  
68 <220> FEATURE:  
69 <223> OTHER INFORMATION: synthetic oligonucleotide  
71 <220> FEATURE:  
72 <221> NAME/KEY: modified\_base  
73 <222> LOCATION: (2)..(2)  
74 <223> OTHER INFORMATION: n represents iso-cytosine  
76 <220> FEATURE:  
77 <221> NAME/KEY: modified\_base  
78 <222> LOCATION: (6)..(6)  
79 <223> OTHER INFORMATION: n represents iso-cytosine  
81 <400> SEQUENCE: 2  
W--> 82 cngttnttcc 10  
85 <210> SEQ ID NO: 3  
86 <211> LENGTH: 10  
87 <212> TYPE: DNA  
88 <213> ORGANISM: Artificial  
90 <220> FEATURE:  
91 <223> OTHER INFORMATION: synthetic oligonucleotide  
94 <220> FEATURE:  
95 <221> NAME/KEY: modified\_base  
96 <222> LOCATION: (3)..(3)  
97 <223> OTHER INFORMATION: n represents iso-cytosine  
99 <220> FEATURE:  
100 <221> NAME/KEY: modified\_base  
101 <222> LOCATION: (7)..(7)  
102 <223> OTHER INFORMATION: n represents iso-cytosine  
104 <400> SEQUENCE: 3  
W--> 105 ggnttgnttag 10  
108 <210> SEQ ID NO: 4  
109 <211> LENGTH: 10  
110 <212> TYPE: DNA  
111 <213> ORGANISM: Artificial  
113 <220> FEATURE:  
114 <223> OTHER INFORMATION: synthetic oligonucleotide  
117 <220> FEATURE:  
118 <221> NAME/KEY: modified\_base  
119 <222> LOCATION: (4)..(4)  
120 <223> OTHER INFORMATION: n represents iso-cytosine  
122 <220> FEATURE:  
123 <221> NAME/KEY: modified\_base  
124 <222> LOCATION: (6)..(6)  
125 <223> OTHER INFORMATION: n represents iso-cytosine  
127 <400> SEQUENCE: 4  
W--> 128 cttnngntctc 10  
131 <210> SEQ ID NO: 5  
132 <211> LENGTH: 10  
133 <212> TYPE: DNA  
134 <213> ORGANISM: Artificial

## RAW SEQUENCE LISTING

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Input Set : A:\PTO.AMC.txt  
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136 <220> FEATURE:  
137 <223> OTHER INFORMATION: synthetic oligonucleotide  
140 <220> FEATURE:  
141 <221> NAME/KEY: modified\_base  
142 <222> LOCATION: (2)..(2)  
143 <223> OTHER INFORMATION: n represents iso-cytosine  
145 <220> FEATURE:  
146 <221> NAME/KEY: modified\_base  
147 <222> LOCATION: (6)..(6)  
148 <223> OTHER INFORMATION: n represents iso-cytosine  
150 <400> SEQUENCE: 5  
W--> 151 cntcangaac 10  
154 <210> SEQ ID NO: 6  
155 <211> LENGTH: 10  
156 <212> TYPE: DNA  
157 <213> ORGANISM: Artificial  
159 <220> FEATURE:  
160 <223> OTHER INFORMATION: synthetic oligonucleotide  
163 <220> FEATURE:  
164 <221> NAME/KEY: modified\_base  
165 <222> LOCATION: (5)..(5)  
166 <223> OTHER INFORMATION: n represents iso-cytosine  
168 <220> FEATURE:  
169 <221> NAME/KEY: modified\_base  
170 <222> LOCATION: (8)..(8)  
171 <223> OTHER INFORMATION: n represents iso-cytosine  
173 <400> SEQUENCE: 6  
W--> 174 gtagntangc 10  
177 <210> SEQ ID NO: 7  
178 <211> LENGTH: 10  
179 <212> TYPE: DNA  
180 <213> ORGANISM: Artificial  
182 <220> FEATURE:  
183 <223> OTHER INFORMATION: synthetic oligonucleotide  
186 <220> FEATURE:  
187 <221> NAME/KEY: modified\_base  
188 <222> LOCATION: (4)..(4)  
189 <223> OTHER INFORMATION: n represents iso-cytosine  
191 <220> FEATURE:  
192 <221> NAME/KEY: modified\_base  
193 <222> LOCATION: (6)..(6)  
194 <223> OTHER INFORMATION: n represents iso-cytosine  
196 <400> SEQUENCE: 7  
W--> 197 ggangntaac 10  
200 <210> SEQ ID NO: 8  
201 <211> LENGTH: 10  
202 <212> TYPE: DNA  
203 <213> ORGANISM: Artificial  
205 <220> FEATURE:

## RAW SEQUENCE LISTING

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Input Set : A:\PTO.AMC.txt  
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206 <223> OTHER INFORMATION: synthetic oligonucleotide  
 209 <220> FEATURE:  
 210 <221> NAME/KEY: modified\_base  
 211 <222> LOCATION: (2)..(2)  
 212 <223> OTHER INFORMATION: n represents iso-cytosine  
 214 <220> FEATURE:  
 215 <221> NAME/KEY: modified\_base  
 216 <222> LOCATION: (7)..(7)  
 217 <223> OTHER INFORMATION: n represents iso-cytosine  
 219 <400> SEQUENCE: 8  
 W--> 220 cngtatnngt 10  
 223 <210> SEQ ID NO: 9  
 224 <211> LENGTH: 10  
 225 <212> TYPE: DNA  
 226 <213> ORGANISM: Artificial  
 228 <220> FEATURE:  
 229 <223> OTHER INFORMATION: synthetic oligonucleotide  
 232 <220> FEATURE:  
 233 <221> NAME/KEY: modified\_base  
 234 <222> LOCATION: (4)..(4)  
 235 <223> OTHER INFORMATION: n represents iso-cytosine  
 237 <220> FEATURE:  
 238 <221> NAME/KEY: modified\_base  
 239 <222> LOCATION: (9)..(9)  
 240 <223> OTHER INFORMATION: n represents iso-cytosine  
 242 <400> SEQUENCE: 9  
 W--> 243 catnggtang 10  
 246 <210> SEQ ID NO: 10  
 247 <211> LENGTH: 10  
 248 <212> TYPE: DNA  
 249 <213> ORGANISM: Artificial  
 251 <220> FEATURE:  
 252 <223> OTHER INFORMATION: synthetic oligonucleotide  
 255 <220> FEATURE:  
 256 <221> NAME/KEY: modified\_base  
 257 <222> LOCATION: (5)..(5)  
 258 <223> OTHER INFORMATION: n represents iso-cytosine  
 260 <220> FEATURE:  
 261 <221> NAME/KEY: modified\_base  
 262 <222> LOCATION: (9)..(9)  
 263 <223> OTHER INFORMATION: n represents iso-cytosine  
 265 <400> SEQUENCE: 10  
 W--> 266 gattntcgnc 10  
 269 <210> SEQ ID NO: 11  
 270 <211> LENGTH: 10  
 271 <212> TYPE: DNA  
 272 <213> ORGANISM: Artificial  
 274 <220> FEATURE:  
 275 <223> OTHER INFORMATION: synthetic oligonucleotide

RAW SEQUENCE LISTING  
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Input Set : A:\PTO.AMC.txt  
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278 <220> FEATURE:  
279 <221> NAME/KEY: modified\_base  
280 <222> LOCATION: (4)..(4)  
281 <223> OTHER INFORMATION: n represents iso-cytosine  
283 <220> FEATURE:  
284 <221> NAME/KEY: modified\_base  
285 <222> LOCATION: (6)..(6)  
286 <223> OTHER INFORMATION: n represents iso-cytosine  
288 <400> SEQUENCE: 11  
  
W--> 289 **gttnangacc** 10  
292 <210> SEQ ID NO: 12  
293 <211> LENGTH: 10  
294 <212> TYPE: DNA  
295 <213> ORGANISM: Artificial  
297 <220> FEATURE:  
298 <223> OTHER INFORMATION: synthetic oligonucleotide  
301 <220> FEATURE:  
302 <221> NAME/KEY: modified\_base  
303 <222> LOCATION: (2)..(2)  
304 <223> OTHER INFORMATION: n represents iso-cytosine  
306 <220> FEATURE:  
307 <221> NAME/KEY: modified\_base  
308 <222> LOCATION: (6)..(6)  
309 <223> OTHER INFORMATION: n represents iso-cytosine  
311 <400> SEQUENCE: 12  
  
W--> 312 **cngaangatc** 10  
315 <210> SEQ ID NO: 13  
316 <211> LENGTH: 10  
317 <212> TYPE: DNA  
318 <213> ORGANISM: Artificial  
320 <220> FEATURE:  
321 <223> OTHER INFORMATION: synthetic oligonucleotide  
324 <220> FEATURE:  
325 <221> NAME/KEY: modified\_base  
326 <222> LOCATION: (4)..(4)  
327 <223> OTHER INFORMATION: n represents iso-cytosine  
329 <220> FEATURE:  
330 <221> NAME/KEY: modified\_base  
331 <222> LOCATION: (9)..(9)  
332 <223> OTHER INFORMATION: n represents iso-cytosine  
334 <400> SEQUENCE: 13  
  
W--> 335 **caantacgnc** 10  
338 <210> SEQ ID NO: 14  
339 <211> LENGTH: 10  
340 <212> TYPE: DNA  
341 <213> ORGANISM: Artificial  
343 <220> FEATURE:  
344 <223> OTHER INFORMATION: synthetic oligonucleotide  
347 <220> FEATURE:

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 03/21/2005  
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Input Set : A:\PTO.AMC.txt  
Output Set: N:\CRF4\03212005\I977615B.raw

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 3,6  
Seq#:2; N Pos. 2,6  
Seq#:3; N Pos. 3,7  
Seq#:4; N Pos. 4,6  
Seq#:5; N Pos. 2,6  
Seq#:6; N Pos. 5,8  
Seq#:7; N Pos. 4,6  
Seq#:8; N Pos. 2,7  
Seq#:9; N Pos. 4,9  
Seq#:10; N Pos. 5,9  
Seq#:11; N Pos. 4,6  
Seq#:12; N Pos. 2,6  
Seq#:13; N Pos. 4,9  
Seq#:14; N Pos. 4,8  
Seq#:15; N Pos. 2,6,7  
Seq#:16; N Pos. 4,8,9  
Seq#:17; N Pos. 2,6,9  
Seq#:18; N Pos. 3,6  
Seq#:19; N Pos. 3,4,7  
Seq#:20; N Pos. 3,6  
Seq#:21; N Pos. 5,8,9  
Seq#:22; N Pos. 5,7  
Seq#:23; N Pos. 5,8  
Seq#:24; N Pos. 5,8  
Seq#:25; N Pos. 5,7,8  
Seq#:26; N Pos. 2,7  
Seq#:27; N Pos. 2,4,9  
Seq#:28; N Pos. 2,3,7  
Seq#:29; N Pos. 5,8  
Seq#:30; N Pos. 5,7  
Seq#:31; N Pos. 3,7  
Seq#:32; N Pos. 4,8  
Seq#:33; N Pos. 4,9  
Seq#:34; N Pos. 4,7,9  
Seq#:35; N Pos. 2,7  
Seq#:36; N Pos. 3,7  
Seq#:37; N Pos. 2,7  
Seq#:38; N Pos. 4,9  
Seq#:39; N Pos. 3,4,9  
Seq#:40; N Pos. 2,6  
Seq#:41; N Pos. 2,6,9  
Seq#:42; N Pos. 3,6  
Seq#:43; N Pos. 4,8  
Seq#:44; N Pos. 5,8

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 03/21/2005  
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Input Set : A:\PTO.AMC.txt  
Output Set: N:\CRF4\03212005\I977615B.raw

Seq#:45; N Pos. 5,7  
Seq#:46; N Pos. 4,8  
Seq#:47; N Pos. 2,7  
Seq#:48; N Pos. 3,6  
Seq#:49; N Pos. 3,7  
Seq#:50; N Pos. 3,4,9  
Seq#:51; N Pos. 2,7

### Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27  
Seq#:28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51  
Seq#:52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75  
Seq#:76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99  
Seq#:100,101,102,103,113,114,115,116,117,118,119,120,121,122,123,124,125,126  
Seq#:127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144  
Seq#:145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162  
Seq#:163,164,165

VERIFICATION SUMMARY  
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Input Set : A:\PTO.AMC.txt  
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L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0  
L:82 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0  
L:105 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0  
L:128 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0  
L:151 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0  
L:174 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0  
L:197 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
L:220 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0  
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
L:266 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0  
L:289 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0  
L:312 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
L:335 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0  
L:358 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0  
L:386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0  
L:414 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0  
L:442 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0  
L:465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0  
L:493 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0  
L:516 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0  
L:544 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0  
L:567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0  
L:590 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0  
L:613 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0  
L:641 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0  
L:664 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0  
L:692 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0  
L:720 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0  
L:743 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0  
L:766 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0  
L:789 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0  
L:812 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0  
L:835 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:0  
L:863 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0  
L:886 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0  
L:909 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0  
L:932 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0  
L:955 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:0  
L:983 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:0  
L:1006 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0  
L:1034 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0  
L:1057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0  
L:1080 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0  
L:1103 M:283 W: Missing Blank Line separator, <400> field identifier  
L:1104 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0  
L:1127 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:0  
L:1150 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:0  
L:1173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:0

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L:1196 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:0

L:1219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:0

L:1247 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:0